Goldie : & : McCulloch

- - MANUFACTURERS OF - -

Steam Engines

Boilers, Mill Gearing, and Furnishings of every Description

ALSO THE WELL-KNOWN

Wheelock :: Automatic :: Engines

(HIGH PRESSURE, COMPOUND AND COMPOUND CONDENSING)

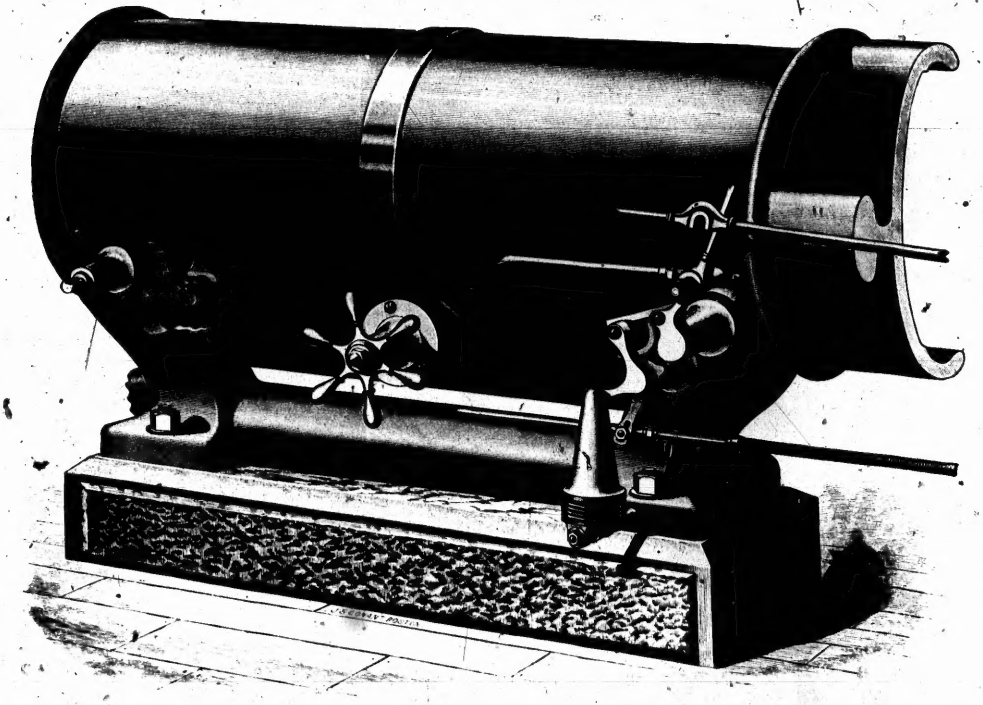
BINGHAM & WEBBER
Toronto
THEIR SPECIALTY
Catalogue : and : Illustrated
Printing

GALT, ONTARIO

THE NEW PATENT SYSTEM

OF

Wheelock Automatic Cut-Off Engine



The general arrangement of the Engine follows the American type, the main bed being of trunk girder pattern, and so arranged that the chief bulk of metal lies in the direct line of strain between the cylinder and crank shaft bearings. The Wheelock Engine was awarded the Great Gold Medal at New York, 1875; the Centennial Medal at Philadelphia, 1876; the Gold Medal at Cincinnati, 1881; Gold Medal at Boston, 1881; and the Grand Prize at Paris, 1878; and at the Millers' International Exposition at Cincinnati, 1880, the Great Gold Medal for the best automatic engine under actual test. The Cincinnati test cost $15,000, and the award given in competition with the Corliss and other automatic engines was, that "The Wheelock Engine gave the best regulation; the highest economy of fuel; the least clearance, and the least trouble to the operator," the highest award ever given to a steam engine. The chief features of the cut-off gear are its great simplicity; the fewness of its moving parts; the small amount of power absorbed in working it, and therefore the absolute control which the governor has over the slightest variation in the load on the engine, and the economy of steam thereby obtained. As distinguished from most of the automatic cut-off engines in the market, the Wheelock Engine has only one eccentric from which both the main steam and cut-off valves are actuated. The wristplate action which exists in the Corliss Engine, being obtained by a very simple and ingenious arrangement (one of the chief features in the construction of this cut-off gear, and the great dissimilarity to ordinary practice), is the suspension of the valve spindles on hardened steel bushes: as a consequence of being thus carried, the valves work with very little power from the absence of friction, and by an ingenious arrangement of the spindles and bushes, a perfectly steam-tight joint is formed, which dispenses with the ordinary stuffing-gland and packing, and wear is practically nil.

The Valves are flat slide, with multiplicity of opening and extraordinary area, with minimum of movement. (See Fig. 1.) By the use of a knuckle-joint movement very slight lap is needed, and almost instantaneous opening and closing are secured with great ease of action under the most extraordinary pressure. The separate shells, or seats, show this knuckle joint movement. (See Figs. 2 and 3.)

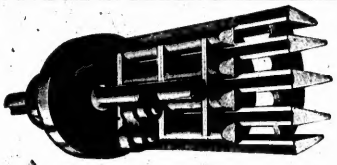


FIG. 1.

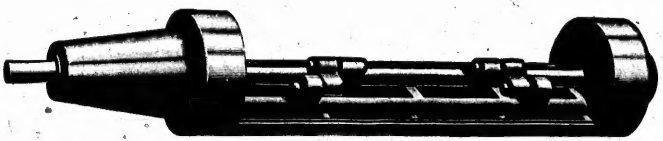


FIG. 2.

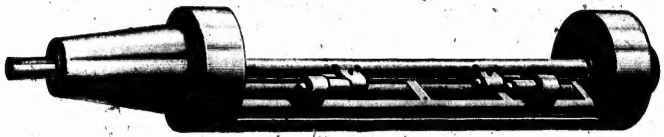


FIG. 3.

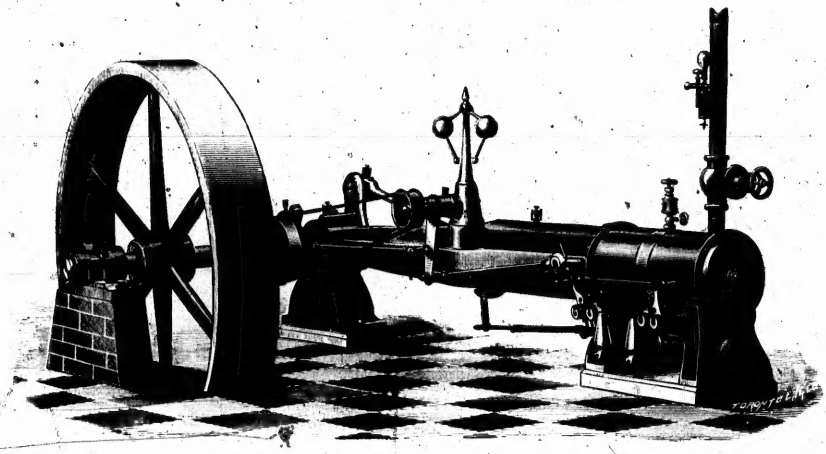
This system can be applied to the Corliss type of any body's make, and we guarantee positive advantage by its use.

These Valves are fitted to separate seats that are driven into the holes in the Cylinder a little tapering, and no Bonnets are used. All the work on them is completed on the work-bench, and when in use they bring *no wear on the Cylinder.*

The system is especially adapted to high speed. The valves are perfectly tight, with no necessity for balancing. By the peculiar arrangement of the valve-movement, the Cut-off is very effective and positive in its action, as the Cut-off Valve has but slight movement after closing, while the knuckle-joint allows of continued movement of the mechanism without moving the valve.

We have replaced a great many Engines of the Brown and Corliss type, and have built more Wheelock Engines than the combined output of all Brown and Corliss Engine builders in the Dominion.

The Wheelock Engine



Having made arrangements with the Patentee for the manufacture of the above celebrated **VARIABLE CUT-OFF ENGINE,** and also put into our Shops a number of special tools for the purpose, we are now prepared to supply these Engines, got up in the best style.

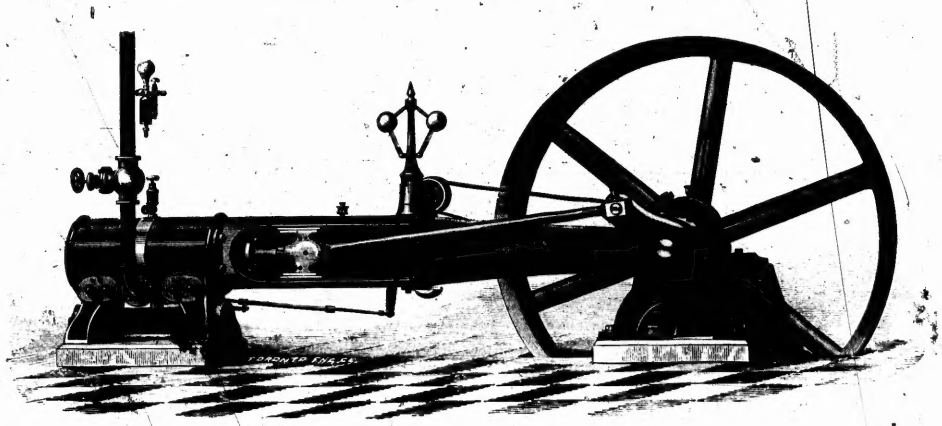
GOLDIE & McCULLOCH,

Canadian Manufacturers of the Wheelock Engine. **GALT, ONTARIO.**

Our Standard Patterns are for the following sizes, viz.:

8	inch	Diameter of Cylinder,	24	inch	Stroke.
9	"	"	24	"	"
10	"	"	28	"	"
11	"	"	28	"	"
12	"	"	30	"	"
13	"	"	30	"	"
14	"	"	34	"	"

15	inch	Diameter of Cylinder,	34	inch	Stroke.
16	"	"	38	"	"
17	"	"	38	"	"
18	"	"	42	"	"
20	"	"	46	"	"
22	"	"	50	"	"
24	"	"	54	"	"



Larger sizes than those included in the above will be made by special arrangement.

List of Canadian Users of the Wheelock Engine

manufactured by Goldie & McCulloch

Craven Cotton Co (2 engines)	Brantford,	Ont.
Wm. Forbes	Toronto	"
Clemens & Wells	Winterbourne	"
Ryan & McBride	Thedford	"
Geo. S. Baldwin	Aurora	"
Simcoe Woollen Co	Simcoe	"
Hamilton Clock Co	Hamilton	"
Bowes, Jameson & Co	Hamilton	"
A. Campbell & Co	St. Thomas	"
Saml. Lukes	Bradford	"
Barchard & Co	Toronto	"
W. H. Banfield	Toronto	"
Cheney, Dunning & Co	Yankleek Hill	"
Thos. Wilson	Harriston	"
McGregor, Gourlay & Co	Galt	"
O. D. Cowan	Gananoque	"
Ayr American Plow Co	Ayr	"
Watson Manufacturing Co	Ayr	"
Wm. Paterson	Brantford	"
W. & F. A. Scott	Galt	"
Canadian Pacific R.R.Co. (3 engines)	Montreal,	Q
A. Griffith	Thorndale,	Ont.
G. P. Tolton	Guelph	"
McBride & Smith	Seaforth	"
Waterford Manufacturing Co	Waterford	"
D. W. Thompson & Co	Toronto	"
A. Moyer & Co	Listowel	"
Geo. Smith & Co	Lambton Mills	"
McCulloch & Harriott	Souris,	Man.
Linton, Lake & Co	Galt,	Ont.
Hudson Bay Co	Winnipeg,	Man.
York Farmers Colonization Co.	Youngstown	Man
John Moody & Son	Ridgetown,	Ont.
John Capell	Toronto	"
John R. Barber	Georgetown	"
Frank S. Wilson	Toronto	"
Wood Bros.	St. George	"
Geo. Howe	Brussels	"
Cobban Manufacturing Co	Toronto	"
Powell & Jones Co.	Peterboro	"
M. Creighton	Comber	"
Thos. Buck	Norwood	"
Hamilton Spice & Coffee Co.	Hamilton	"
Jas. S. Plews	Shelburne	"
T. H. Wyman	Hawkesbury	"
J. Stevenson	Peterboro	"
D. W. Hibner Co	Berlin	"
J. & L. Pfeffer	Milverton	"
Cheney, Dunning & Co.	Alexandria	"
John Hern	Orillia	"
W. Henderson	Mount Forest	"
John Irwin	Wiarton	"
A. K. McKay	Orillia	"
Dufton & Myers	St. Marys	"
D. H. Dorman	Mitchell	"
John Carlyle	Toronto	"
John Manwaring	Woodham	"
John Ratz	Elmira	"
James Gordon	Ottawa	"
Simpson & Co	Berlin	"
Canadian Pacific R. R. Co.	Vancouver,	B.C.
Grant & Co	Chesley,	Ont.
J. & R. Kidd	Tilbury	Ont.
J. Y. Shantz & Sons	Berlin	"
J. Y. Shantz	Berlin	"
A. & P. McNaughton	Alexandria	"
Burr Bros.	Guelph	"
Geo. Vick	Orillia	"
James Hay & Co	Woodstock	"
Barr & Wright	Renfrew	"
John Fletcher	Toronto	"
Crompton Corset Co.	Berlin	"
C. A. Ahrens	Berlin	"
J. E. Davidson	Toronto	"
J. Kaufman	Berlin	"
R. Forbes & Co	Hespeler	"
S. F. Taylor & Son	Walkerton	"
J. Lee & Son	Walkerton	"
D. W. Karn & Co.	Woodstock	"
Columbia Milling Co.	Enderby,	B.C.
Geo Carter, Son & Co	St. Marys,	Ont.
J. M. Lott	Edgar	"
T. Tushingham & Son	Toronto	"
John Galbraith	Allandale	"
Jas. Black	Toronto	"
Evans Bros. & Littler	Ingersoll	"
Halifax Gas Light Co. (2 engines)	Halifax,	N. S.
H. Hollingshead	Dutton,	Ont.
Doutigny & Hughton	Arnprior	"
Sauer & Baird Bros.	Plattsville	"
Anthis Mfg. Co.	Berlin	"
J. P. Wagner	Toronto	"
Berlin Gas Co.	Berlin	"

List of Users of the Wheelock Engine, continued.

Wagner, Zeidler & Co. . . . Toronto Junction Ont.
Corporation of Orillia . . . . . Orillia "
John Wood & Sons . . . . . Toronto "
Joseph Simpson . . . . . Toronto "
Jacob Zingsheim . . . . . Hamilton "
Fredericton Gas Co. . . . . Fredericton, N.B.
Yarmouth Electric Light Co. . . . . Yarmouth, N.S.
Guelph Gas Co . . . . . Guelph, Ont.
Oshawa Electric Light Co. . . . . Oshawa "
John Gourlay . . . . . Galt "
J. G. Reiner . . . . . Wellesley "
J. E. Davidson . . . . . Toronto "
D. Scrimgeour . . . . . Stratford "
Cobourg Electric Light Co. . . . . Cobourg "
O. Newcombe & Co. . . . . Toronto "
Woodstock Electric Light Co. . . . . Woodstock "
Eidt & Schmidt . . . . . Mildmay "
R. Lang & Son . . . . . Berlin "
Campbell & Co. . . . . Blenheim "
J. D. Saunby . . . . . London "
Goldie & McCulloch . . . . . Galt "
J. E. Humphrey . . . . . Moncton, N.B.
Beardmore & Co . . . . . Acton, Ont.
W. Treleaven . . . . . Lucknow "
Knight & Wilson . . . . . Alliston "
Hess Bros. . . . . Listowel "
A. W. Pringle . . . . . Belleville "
Robt. Light . . . . . Napanee "
Smith & Co. . . . . Toronto "
R. Dinnis . . . . . Toronto "
J. H. Broadfoot . . . . . Seaforth "
Waverley Knitting Co. . . . . Preston "
Peter Knechtel . . . . . Hanover "
Jacob Raymer . . . . . Stouffville "
Jas. Watson . . . . . Toronto "
Alex. Jardine & Co. . . . . Toronto "
D. Knechtel . . . . . Hanover "

C. Rogers & Sons . . . . . Toronto, Ont.
Bowman & Wiegand . . . . . Arthur "
Hay Bros. . . . . Listowel "
Belleville Gas Light Co. . . . . Belleville "
Brockville Gas Light Co. . . . . Brockville "
E. G. Thomas & Co. . . . . Woodstock "
Charlottetown Woolen Mill Co., Charlottetown, P.E.I.
Alex. Hodson . . . . . South Finch, Ont.
L. Breithaupt & Co. . . . . Berlin "
A. Newland & Co. . . . . Galt "
Westman & Baker . . . . . Toronto "
John Hodson . . . . . Dunbar "
T. & J. Martin . . . . . Ottawa "
J. & A. Armstrong . . . . . Guelph "
Brantford Cordage Co. . . . . Brantford "
C. Kreitzeiger . . . . . Heidelberg "
Coulter & Jewett . . . . . Toronto "
Geo. McCulloch & Co. . . . . Rapid City, Man.
Dickenson & Suess . . . . . Hamilton, Ont.
Ball Electric Light Co. . . . . London "
Shultz Bros. . . . . Brantford "
Saml. Mathers . . . . . Hamilton "
Jas. Wallace . . . . . Belleville "
Toronto News Co. . . . . Toronto "
Workman & Watt . . . . . Brantford "
W. Bell & Co. . . . . Guelph "
Dudley & Scott . . . . . Toronto "
A. Falk & Co. . . . . Mount Forest "
W. Leak & Co. . . . . Toronto "
Peter Hay . . . . . Galt "
Toronto Press Brick & Terra Cotta Co., Milton "
Boyd, Caldwell & Co. . . . . Lanark "
Geo. Rathbone . . . . . Toronto "
Jos. E. Seagram, (2 engines) . . . . . Waterloo "
A. Goodfellow . . . . . Tara "
D. McDonald . . . . . Orangeville "
Houston & Harding . . . . . Montreal, Que.

W. Stahlschmidt & Co. . . . . Preston, Ont.
Gooderham & Worts . . . . . Toronto "
J. Cawthrop . . . . . Thamesford "
H. McCormack . . . . . Ottawa "
Barnum Iron & Wire Co. . . . . Windsor "
C. J. Smith . . . . . Moosomin, Man.
Hamilton Electric Light Co. . . . . Hamilton, Ont.
D. Maxwell . . . . . St. Mary's "
F. T. Huber & Co. . . . . Berlin "
F. Greybill & Co. . . . . Waterloo "
W. A. Gefolamy . . . . . Tara "
A. Harris, Son & Co. . . . . Brantford "
Galt Knitting Co. . . . . Galt "
Brantford Cordage Co. . . . . Brantford "
W. B. McAllister . . . . . Pembroke "
Hess Bros. . . . . Toronto "
Courtland Carriage Co. . . . . Brantford "
A. Dobson & Son . . . . . Cannington "
Berlin Felt Boot Works . . . . . Berlin "
Stratford Gas Co., for the Stratford Electric Light Co. . . . . Stratford "
John Bertram & Sons . . . . . Dundas "
Wm. Mason & Sons . . . . . Ottawa "
D. Hibner & Co. . . . . Berlin "
Macgregor, Gourlay & Co. . . . . Galt "
A. W. Brodie, (compound cond'ng) . . Hespeler "
Thos. Foster . . . . . Tara "
Gilchrist, Green & Co. . . . . Wingham "
Thomas Bell . . . . . Wingham "
The Patterson & Bro. Co. . . . . Woodstock "
McDougall & Co. . . . . Galt "
Corporation of Town of Goderich, for their Electric Light Station . . . . . Goderich "
Methodist Publishing House . . . . . Toronto "
Ontario Industrial Loan and Investment Co. . . . . Toronto "
Paris Wincey Mill Co. . . . . Paris "

List of Users of the Wheelock Engine, continued.

George Cassidy ..... False Creek, B.C.	M. F. Beach ..... West Winchester, Ont.	M. Beatty & Sons ..... Welland, Ont.
Sandy McVean ..... Dresden, Ont.	Spink Bros ..... Toronto "	Ireland National Food Co. (comp.). Toronto "
W. H. Verity & Son ..... Exeter "	Mount Forest Electric Light Co'. Mt. Forest "	Thomas Eyre ..... North Augusta "
Malcolm & Smith ..... Brussels "	A. Davis & Son ..... King "	Kay Electric Light Co. ..... Hamilton "
M. J. Smith & Co., (second engine). Toronto "	George Bros. ..... Stouffville "	Chas. Boeckh & Sons ..... Toronto "
Wm. Partlo, (comp. condensing).... Ingersoll "	A. Newell & Co. ..... Toronto "	D. S. Clemens. ..... Fisher's Mills "
John Cameron & Sons ..... Toronto "	Greening Wire Manufacturing Co. Hamilton "	A. Harris, Son & Co., (being the second Wheelock inside a year)..... Brantford "
Sykes & Ainley ..... Glen Williams "	McKechnie Machine Co. ..... Hamilton "	

The following Electric Light Companies are using the Wheelock Engine :

Yarmouth Electric Light Co. ..... Yarmouth, N.S.	Ball Electric Light Co. ..... London, Ont.
Fredericton Electric Light Co. ..... Fredericton, N.B.	Woodstock Electric Light Co. ..... Woodstock "
Halifax Gas Light Co. ..... Halifax, N.S.	Cobourg Electric Light Co. ..... Cobourg "
Oshawa Electric Light Co ..... Oshawa, Ont.	Orangeville Electric Light Co. ..... Orangeville "
Guelph Gas Co ..... Guelph "	Mt. Forest Electric Light Co. ..... Mt. Forest "
Berlin Gas Co ..... Berlin "	Hamilton Electric Light Co. (2 engines) ..... Hamilton "
Galt Electric Light Co. ..... Galt "	Corporation of Town of Goderich. ..... Goderich "
Orillia Electric Light Co ..... Orillia "	Stratford Gas Co. ..... Stratford "
Belleville Gas Co. ..... Belleville "	Reliance Electric Light Co. ..... Waterford "
Brockville Gas Co ..... Brockville "	Ball Electric Light Co. ..... Arnprior "
T. Eaton & Co's Electric Light Station ..... Toronto "	Corporation of Town of Mitchell. ..... Mitchell "
Renfrew Electric Light Co ..... Renfrew "	

We are now building an Engine for the Kay Electric Light Co., for their Works in Hamilton, Ont., also for Fort Wayne Jenny Electric Light Co., for Brockville, Ont.

We are building High Pressure, Compound, and Compound Condensing Engines of the Wheelock type.

We are now building Wheelock Engines for the following firms:

J. W. MANN MFG. CO.	Brockville, Ont.
THOS. WHITE	Hawkesbury, "
T. EATON & CO., (2 engines)	Toronto, "
TORONTO PAPER CO.	Cornwall, "
GLOBE FURNITURE CO.	Walkerville, "
BALL ELECTRIC LIGHT CO.	Arnprior, "
A. H. WHELER	Meadowvale, "
HAMILTON ELECTRIC LIGHT CO., (second engine)	Hamilton, "
CORPORATION OF TOWN OF MITCHELL	Mitchell, "
ONTARIO GOVERNMENT, for Central Prison	Toronto, "
FORT WAYNE JENNY ELECTRIC LIGHT CO.	Brockville, "
IRELAND NATIONAL FOOD CO.	Toronto, "

AT THE RECENT INVENTORS' EXHIBITION IN LONDON, ENGLAND, A GOLD MEDAL WAS AWARDED THE WHEELOCK ENGINE.

The following, from the Worcester, Mass., "Evening Gazette," gives the reader an idea of the success of the Wheelock Engine abroad:

"MR. JEROME WHEELOCK has just returned from a business trip to England, and reports a most favorable errand. He is now engaged in getting out several drawings of his improved cut-off engine, to send abroad. The machinery in the London, Eng. Exhibition building is driven by a Wheelock 300 horse power engine, which is admired by the crowned heads and expert mechanics of all Europe. Another of his engines is in use in the British arsenels in Woolwich, having 1,000 horse power. The French Government has ordered engines sufficient to cover 4,500 horse power to be distributed throughout its various arsenels, and also engines having several thousand horse power for the Water-works of Paris. Another is about to be put in a 100,000 spindle mill at Manchester, Eng., having a 56 in. cylinder and 8 ft. stroke; another at Oldham, and still another is being put up in India by British authority. In this country one of the largest shipments was recently made to the Chicago City Railroad Company for drawing street cable cars consisting of two engines, 36 x 72, making the eleventh consecutive engine sent to this company."

In our own Dominion the success of the Wheelock Engine is unparalleled; upwards of two hundred and sixty are now in use, and the firm busy on ordered work.

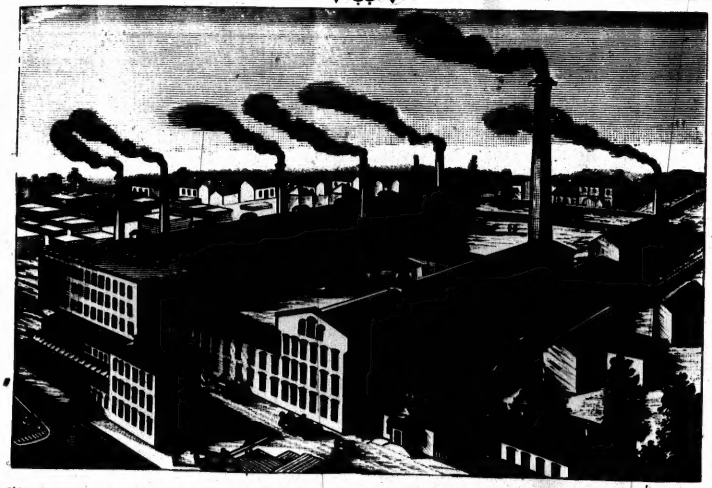
GOLDIE & McCULLOCH

MANUFACTURERS OF

Wood Working Machinery,
Wool Machinery
Shingle and Barrel Machinery.

Fire and Burglar Proof Safes,
Vault Doors,
Etc., etc.

New Process Flouring Mills Etc.



Oat Meal Machinery

Saw Mills

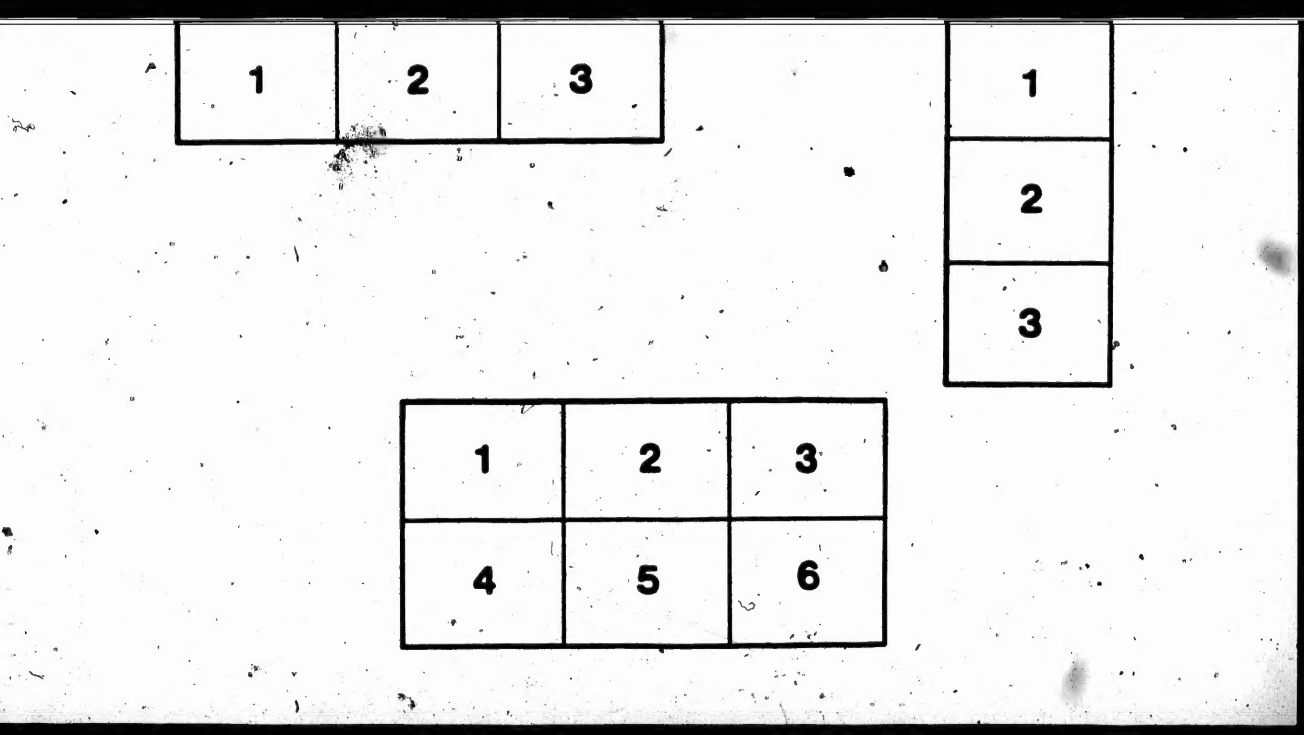
Etc.

All parties requiring ENGINES, MILL MACHINERY, SAFES, VAULT DOORS, or anything in our line of manufacture, would do well to communicate with us before ordering elsewhere.

PROMPT ATTENTION GIVEN TO ALL ORDERS.

Prices, Catalogues and full Information Furnished on Application.

GALT - - - - - **- - ONTARIO**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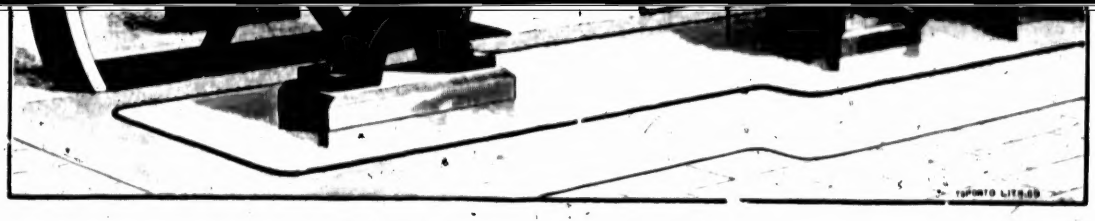
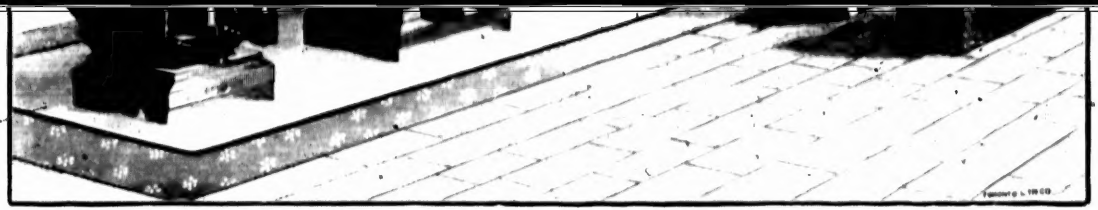


We have several of these Engines running



Giving the highest degree of satisfaction.